

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): ~~Deagglomerated-~~A deagglomerated barium sulphate containing a dispersant and comprising primary particles which contain crystallization inhibitor and have an average size < 0.5 μm , preferably < 0.1 μm , in particular < 80 nm, more preferably < 50 nm, with particular preference < 20 nm and with very particular preference < 10 nm.

Claim 2 (Currently Amended): ~~Deagglomerated-~~The deagglomerated barium sulphate according to Claim 1, characterized in that wherein 90% of the secondary barium sulphate particles are smaller than 2 μm , preferably < 250 nm, more preferably < 200 nm, with very particular preference < 130 nm, more preferably still < 100 nm and with particular preference < 50 nm.

Claim 3 (Currently Amended): ~~Deagglomerated-~~The deagglomerated barium sulphate according to Claim 1, characterized in that wherein the crystallization inhibitor is selected from compounds having at least one anionic group.

Claim 4 (Currently Amended): ~~Deagglomerated-~~The deagglomerated barium sulphate according to Claim 3, characterized in that wherein the anionic group of the crystallization inhibitor is at least one sulphate, at least one sulphonate, at least two phosphate, at least two phosphonate or at least two carboxylate group(s).

Claim 5 (Currently Amended): ~~Deagglomerated-~~The deagglomerated barium sulphate according to Claim 1, 2, or 3, characterized in that wherein the crystallization

inhibitor is a compound of the formula (I) or salt thereof having a carbon chain R and n substituents [A(O)OH], in which R is an organic radical which has hydrophobic and/or hydrophilic moieties, R being a low molecular mass, oligomeric or polymeric, optionally branched and/or cyclic carbon chain which optionally contains oxygen, nitrogen, phosphorus or sulphur heteroatoms, and/or being substituted by radicals which are attached via oxygen, nitrogen, phosphorus or sulphur to the radical R, and

A being C, P(OH), OP(OH), S(O) or OS(O),

and n being 1 to 10 000, preferably 1 to 5.

Claim 6 (Currently Amended): ~~Deagglomerated~~ The deagglomerated barium sulphate according to ~~any one of Claims~~ Claim 1 to 5, characterized in that, wherein the crystallization inhibitor is a carboxylic acid having at least two carboxylate groups and at least one hydroxyl group, an alkyl sulphate, an alkylbenzenesulphonate, a polyacrylic acid or an optionally hydroxy-substituted diphosphonic acid.

Claim 7 (Currently Amended): ~~Deagglomerated~~ The deagglomerated barium sulphate according to Claim 1, characterized in that wherein the dispersant has anionic groups which are able to interact with the surface of the barium sulphate, preferably carboxylate, phosphate, phosphonate, bisphosphonate, sulphate or sulfonate groups.

Claim 8 (Currently Amended): ~~Deagglomerated~~ The deagglomerated barium sulphate according to Claim 1, characterized in that wherein the dispersant endows the barium sulphate particles with a surface which prevents reagglomeration and/or inhibits agglomeration electrostatically, sterically or both electrostatically and sterically.

Claim 9 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to Claim 8, ~~characterized in that~~wherein the dispersant has carboxylate, phosphate, phosphonate, bisphosphonate, sulphate or sulphonate groups which are able to interact with the barium sulphate surface and which have one or more organic radicals R¹ which have hydrophobic and/or hydrophilic moieties.

Claim 10 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to Claim 9, ~~characterized in that~~wherein R¹ is a low molecular mass, oligomeric or polymeric, optionally branched and/or cyclic carbon chain which optionally contains oxygen, nitrogen, phosphorus or sulphur heteroatoms and/or is substituted by radicals which are attached via oxygen, nitrogen, phosphorus or sulphur to the radical R¹ and the carbon chain is optionally substituted by hydrophilic or hydrophobic radicals.

Claim 11 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to Claim 9, ~~characterized in that~~wherein the dispersant is a phosphoric diester having a polyether group and a C6-C10 alkenyl group as moieties.

Claim 12 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to ~~Claims 9 to 11~~Claim 9, ~~characterized in that~~wherein the dispersant has groups for coupling to or into polymers.

Claim 13 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to Claim 12, ~~characterized in that~~wherein the dispersant which prevents reagglomeration sterically is a polymer which is substituted by polar groups, such as

~~hydroxyl groups or amino groups~~, and as a result thereof the barium sulphate particles are externally hydrophilicized.

Claim 14 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to Claim 13, ~~characterized in that~~wherein the dispersant has polyether groups substituted by hydroxyl groups or amino groups.

Claim 15 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to Claim 14, ~~characterized in that~~wherein the hydroxyl groups and amino groups function as reactive groups for coupling to or into polyepoxide resins.

Claim 16 (Currently Amended): ~~Deagglomerated~~The deagglomerated, additionally deagglomerable barium sulphate according to Claim 15, ~~characterized in that~~wherein the dispersant is a polyether polycarboxylate which is substituted terminally on the polyether groups by hydroxyl groups.

Claim 17 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to ~~any one of the preceding claims, characterized in that~~Claim 1, wherein the crystallization inhibitor and the dispersant are each present in the deagglomerated barium sulphate in an amount of up to 2 parts by weight per part by weight of barium sulphate, preferably up to 1 part by weight per part by weight of barium sulphate, in particular in an amount of 1 % to 50% by weight in each case.

Claim 18 (Currently Amended): ~~The deagglomerated~~Deagglomerated barium sulfate according to Claim 1, wherein any one of the preceding claims, characterized in that it is obtainable

- a) by wet-grinding a barium sulphate precipitated using a crystallization inhibitor, the wet grinding taking place in the presence of the dispersant, with the proviso that crystallization inhibitor and dispersant may also be the same, or
- b) by precipitating barium sulphate in the presence of a crystallization inhibitor and of a dispersant which prevents reagglomeration and/or inhibits agglomeration electrostatically, sterically, or both electrostatically and sterically.

Claim 19 (Currently Amended): ~~Deagglomerated~~The deagglomerated barium sulphate according to Claim 1, ~~characterized in that~~wherein it is in the form of a suspension in water, in an organic liquid, in a mixture of water and organic liquid, or as a suspension in a plastics premix, it being possible if desired for stabilizing additives to be present, ~~preferably acids, particularly carboxylic acids, especially acetic acid.~~

Claim 20 (Currently Amended): ~~The deagglomerated~~ barium sulphate in the form of a suspension according to Claim 19, ~~characterized in that~~wherein it is present in the suspension in an amount of 0.1 % up to 70% by weight.

Claim 21 (Currently Amended): ~~Dry~~A dry powder which can be redispersed to form deagglomerated barium sulphate, obtainable by drying deagglomerated barium sulphate according to ~~any one of Claims 1 to 20~~Claim 1.

Claim 22 (Currently Amended): ~~Process~~A process for preparing deagglomerated barium sulphate according to Claim 1, ~~characterized in that~~ wherein

- a) precipitated barium sulphate having a primary particle size of < 0.5 μm is deagglomerated and optionally dried in the presence of a dispersant and water or an organic liquid or a mixture thereof, starting from barium sulphate precipitated in the presence of a crystallization inhibitor, or
- b) barium sulphate having a primary particle size of < 0.5 μm is precipitated in the presence of a crystallization inhibitor and a dispersant which prevents reagglomeration and/or inhibits agglomeration, and is optionally dried.

Claim 23 (Currently Amended): ~~Process~~The process according to Claim 22, ~~characterized in that~~wherein barium sulphate with a primary particle size < 0.5 μm , ~~preferably < 100 nm, more preferably < 80 nm, with particular preference < 50 nm, with very particular preference < 20 nm, more preferably still < 10 nm~~ is precipitated or used and the barium sulphate is optionally deagglomerated until 90% of the secondary particles are ~~preferably < 1 μm , in particular < 250 nm, more preferably < 200 nm, with particular preference < 130 nm, with very particular preference < 100 nm, more preferably still < 50 nm~~.

Claim 24 (Currently Amended): ~~Process~~The process according to Claim 22 or 23, ~~characterized in that~~wherein the deagglomerated barium sulphate is dried and/or processed, optionally with addition or removal of water, an organic liquid or a mixture of both, to give a suspension which contains water or an optionally water-containing organic liquid.

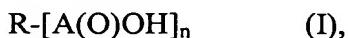
Claim 25 (Currently Amended): ~~Plastics~~A plastics premix, preferably for resin systems, comprising deagglomerated barium sulphate according to ~~any one of Claims~~Claim 1 to 21.

Claim 26 (Currently Amended): ~~Use~~A method of use of deagglomerated barium sulphate according to ~~any one of Claims~~Claim 1 to 21 for producing plastics and adhesives.

Claim 27 (Currently Amended): Plastics and adhesives comprising deagglomerated barium sulphate according to ~~any one of Claims~~Claim 1 to 21.

Claim 28 (Currently Amended): Curable compositions comprising at least one curable constituent (A) selected from the group consisting of low molecular mass, oligomeric and polymeric compounds and deagglomerated barium sulphate according to ~~any one of Claims~~Claim 1 to 21.

Claim 29 (Original): As an intermediate, barium sulphate with an average primary particle size < 50 nm and with crystallization inhibitor incorporated by precipitation, the crystallization inhibitor having at least one sulphate, at least one sulphonate, at least two phosphate, at least two phosphonate or at least two carboxylate groups and being a compound of the formula (1) or a salt thereof



in which

R is an organic radical which has hydrophobic and/or hydrophilic moieties, R preferably being a C1-C20 alkyl group or a C1-C2 alkyl group which is substituted by

oxygen, nitrogen, phosphorus or sulphur or is substituted by radicals which are attached via oxygen, nitrogen, phosphorus or sulphur to the radical R, and

A being C, P(OH), OP(OH), S(O) or OS(O),

and n being 1 to 10 000, preferably 1 to 5.

Claim 30 (Currently Amended): The barium sulphate according to Claim 29,
~~characterized by wherein the barium sulphate has~~ a particle size of < 30 nm, in particular < 20 nm, with very particular preference < 10 nm.

Claim 31 (Currently Amended): The barium sulphate according to Claim 29,
~~characterized by wherein the barium sulphate has~~ a BET surface area of at least 30 m²/g,
~~preferably at least 40 m²/g, in particular at least 45 m²/g and very particularly at least 50 m²/g.~~

Claim 32 (Currently Amended): The barium sulphate according to Claims 29 to 31,
~~characterized by incorporation by precipitation of citric acid as~~Claim 29, wherein the
crystallization inhibitor is citric acid.

Claim 33 (New): The deagglomerated barium sulphate according to Claim 1,
wherein the primary particles have an average size < 0.1 μm.

Claim 34 (New): The deagglomerated barium sulphate according to Claim 1,
wherein 90% of the secondary barium sulphate particles are smaller than 2 μm.

Claim 35 (New): The deagglomerated barium sulphate according to Claim 1, wherein the crystallization inhibitor and the dispersant are each present in the deagglomerated barium sulphate in an amount of 1% to 50% by weight per part by weight of barium sulphate in each case.

Claim 36 (New): The deagglomerated barium sulphate according to Claim 22, wherein the stabilizing additive to be present is a carboxylic acids.